

**CONFIDENTIAL**~~SECRET~~

23 October 1956

**MEMORANDUM FOR THE RECORD****SUBJECT:** Visit with [ ] on Portable Hydrogen Generator

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1. On 19 October 1956 the undersigned visited [ ] at his laboratory at [ ] and discussed problems (operational and engineering) involved in designing a satisfactory portable hydrogen generator.

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2. [ ] was aware of the requirement of needing to provide 250 pounds of lift but was not aware of the maximum time limit for generation of one hour nor the requirement that the generator, once started, needs to be nearly self-controlling.

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3. [ ] had chosen to work with a lithium hydride system. His original ideas needed modification after he was made aware of some of the additional requirements of the system. He displayed a good deal of ingenuity in his approach, however, and this quality is definitely necessary when trying to meet a set of requirements as difficult as these. He was informed of the fact that [ ] had been unable to design a satisfactory lithium hydride system but he remained optimistic about his chances of being able to overcome the problems.

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4. [ ] sketched out, in the presence of the undersigned, a new approach to a lithium hydride generator in which he utilized what he termed a "water pump" system in which the hydrogen evolved would be used to lift water up some several feet where it would be introduced into the generator to permit continuation of the  $\text{LiH}$ ,  $\text{H}_2\text{O}$  reaction. This process would also serve to "scrub" the hydrogen, removing the water vapor evolved during the reaction. [ ] was directed to try the design out on a laboratory scale and he will begin work shortly on a 4.5 cubic foot model (using 50 grams of  $\text{LiH}$ ).

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5. [ ] showed an interest in doing further work on the problem, hoping ultimately to get to a full scale model. Presently, however, no more than a laboratory operation is warranted. In the meantime, it was presumed by the undersigned, the financial arrangements existing between [ ] office and [ ] could continue. Another visit in about three weeks was tentatively agreed upon.

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6. It is the opinion of the undersigned that [ ] is as likely (and perhaps more likely) as any contractor might be of satisfying the requirements of the Portable Hydrogen Generator. At the same time, however, it deserves emphasis that these requirements are extremely difficult to meet -- by anyone.

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cc:**CONFIDENTIAL**

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CENTRAL INTELLIGENCE AGENCY

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TO	NAME AND ADDRESS	INITIALS	DATE
1			10/23
2			10/25
3			
4			

5 File: ED-147

6 C/TSS/ED

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<input type="checkbox"/>	ACTION	<input type="checkbox"/>	DIRECT REPLY	<input type="checkbox"/>	PREPARE REPLY
<input type="checkbox"/>	APPROVAL	<input type="checkbox"/>	DISPATCH	<input type="checkbox"/>	RECOMMENDATION
<input type="checkbox"/>	COMMENT	<input type="checkbox"/>	FILE	<input type="checkbox"/>	RETURN
<input checked="" type="checkbox"/>	CONCURRENCE	<input type="checkbox"/>	INFORMATION	<input type="checkbox"/>	SIGNATURE

Remarks:

This visit was a follow-up on the letter you recently received from [redacted] and turned over to me.

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We plan to proceed as outlined in the attached memo. Your concurrence would be appreciated.

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FROM: NAME, ADDRESS AND PHONE NO.				DATE
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